



King County

Department of Natural Resources and Parks
Water and Land Resources Division
Noxious Weed Control Program
206-296-0290 TTY Relay: 711

BEST MANAGEMENT PRACTICES Policeman's Helmet (*Impatiens glandulifera*) Balsaminaceae Class B Noxious Weed

Impact

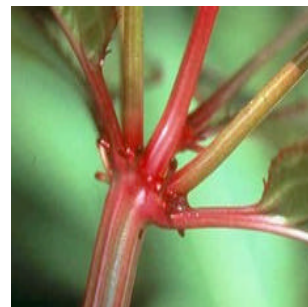
- Policeman's helmet is an aggressive invader of wetlands and streams that escapes from gardens displacing native plants and threatens habitat.
- The combination of dense stands, great height, and large leaves suppresses other plants and creates bare patches under the policeman's helmet's canopy.
- Its strong roots anchor plants and enable them to establish in swift moving water. These plants contribute to flooding and erosion by changing or stopping the movement of water.
- It competes with native plants for pollinators such as bumblebees, reducing native plants' ability to set seed.



Policeman's helmet flowers

Description

- Hollow-stemmed annual plant ranging from 3 to 8 feet in height.
- The plant stems are smooth in texture, multi-branched, reddish in color, and have large swollen nodes and glands.
- The spurred, irregular five parted flowers resemble an English policeman's helmet. The flower color can range from white to pink to red to purple. The flowers are arranged in sparse clusters from the leaf axils.
- The large simple leaves are rounded, sharply toothed, and can be opposite or whorled in groups of three.



LOOK ALIKES. Another common *impatiens* species is the yellow and reddish colored jewelweed or touch-me-not (*Impatiens noli-tangere*). The flower shape and color of foxglove (*Digitalis purpurea*) is similar to policeman's helmet.

Close up of Policeman's helmet's glands

Habitat

- Found in wetlands, riparian areas, gardens, and parks.
- It is tolerant of many soil types and requires high moisture content, although not necessarily standing water.
- It can grow in full sun as well as partial shade. This shade tolerance allows the plant to invade woodland streams as easily as more disturbed lowland waterways.



Close up of Policeman's helmet's seed pods and leaves



Policeman's Helmet infestation at Kelsey Creek Park

Reproduction

- Seedlings with large seed leaves (cotyledons), emerge in thick stands in early spring beginning in March through April.
- Annual plant, flowers from July until September.
- Seed production begins in late summer through fall until first frost (August-September). It can produce from 800 to 2500 seeds per plant.
- Seeds are large in size (3 to 5 mm) and black when mature. The seeds overwinter in soil until the following spring.
- Seeds are dispersed from mature capsules, which upon the slightest touch will explode and eject the seeds up to 15 feet.
- The seeds can float and be moved along waterways and deposited on stream banks.
- Seed banks are viable in natural conditions for 18 months. The seeds require cold weather to break dormancy.

Control Methods

The preferred management plan uses Integrated Pest Management (IPM). IPM involves selecting from a range of possible control methods to match the management requirements of each specific site. The goal is to maximize effective control and to minimize negative environmental, economic and social impacts. Management will require dedication over a number of years, and should allow for flexibility in method as appropriate..

Early Detection and Prevention

- Single plants and isolated small populations can be hand-pulled or dug up, but the site should be monitored the following year for new seedlings from the seed bank.
- Do not purchase or plant policeman's helmet plants or seeds, it is frequently sold or shared as a garden ornamental. According to state quarantine laws it is illegal to buy, sell or offer policeman's helmet for sale.
- Prevent plants from spreading from existing populations by washing vehicles, boots and animals that have been in infested areas.

Manual

- Policeman's helmet is an annual plant with relatively shallow roots and can be pulled very easily during all life stages. **Pull or dig up plants in the spring or early summer** when the soil is still moist and before the plant develops seed capsules.
- If the plants are in flower or have developed seed capsules it is very difficult to pull them without causing the capsules to explode and eject its seeds. Carefully place a bag around the entire flower head cluster to prevent the seeds from escaping. **Cut off the bagged flower heads and dispose either with yard waste that will be commercially composted or with household trash.**
- The vegetative and pre-flowering parts of the plants can be dried out and composted on site, usually within 6-7 days. Larger piles may take up to two weeks before they are destroyed. The piles could either be exposed to air or covered to aid in decomposition.
- When removing vegetation near streams and wetlands use barriers to prevent sediment and vegetative debris from entering the water system.

Mechanical

- Mechanical control methods using manually operated grass and brush cutting tools are very effective and will reduce the risk of disturbance and erosion compared to hand-pulling.
- Mowed or cut plants may re-sprout later in the season. Follow up may include either hand-pulling or additional mowing treatments.
- If plants are in flower or have developed seed capsules remove flowering plant parts and capsules before cutting.

Biological

- No biological control agents have been identified.

Chemical

- Chemical control options may differ for private, commercial and government agency users. Follow all label directions. Herbicides should only be applied at the rates and for the site conditions / land usage specified on the label.
- **Certain herbicides can not be used in aquatic areas or their buffers.** If herbicides are used, make sure that their use is allowed at your site. Contact your local noxious weed control program for control guidelines in your area.
- All aquatic herbicides are restricted-use herbicides. Purchase and application of these herbicides can only be done by licensed aquatic herbicide applicators.
- Permits are required before applying herbicides in aquatic areas.
- Controlling policeman's helmet with herbicide may be used to control large infestations where accessibility of people and equipment is limited. Using herbicides on isolated plants and small sites is not recommended since the plants are hollow-stemmed annuals that are easily pulled.
- Herbicides that may be effective include selective and non-selective herbicides.

Legal Status in King County:

Policeman's helmet is a Class B Noxious Weed. The King County Noxious Weed Control Board requires property owners to control policeman's helmet on private and public lands throughout the county.

Local Distribution

Infestations are scattered throughout King County. The largest occur in parks and along streams in the Kelsey Creek drainage in Bellevue, and in Peasley Canyon in Auburn. Other notable sites include Carkeek Park, Meadowbrook Park, Thornton Creek Open Space, and Ravenna Park in Seattle.

Policeman's helmet is commonly found in ornamental gardens where it has been intentionally introduced. Cities where it has been observed in landscaped areas include City of Auburn, Bellevue, Black Diamond, Carnation, Covington, Duvall, Enumclaw, Federal Way, Issaquah, Kenmore, Kent, Maple Valley, Normandy Park, Ravensdale, Renton, Seattle, Shoreline, Skykomish, and Vashon.

History

- Policeman's helmet seeds were sent from the Himalayan region of northern India and Kashmir to Europe in the mid-19th century as a garden ornamental. Naturalized populations were first recorded in 1855 in England, and continued to spread throughout the British Isles.
- In the mid 1990's western Europe began controlling policeman's helmet after as much as 40% of England's riparian habitat had been invaded. The King County Noxious Weed Control Program began monitoring it in 1996 and has found over 100 sites by 2002.
- It is tallest annual plant in Europe and is considered one of the "top 20" alien species in Britain based on its abundance and distribution.

References

1. *Impatiens glandulifera*: Written findings of the Washington State Noxious Weed Control Board, November 1998.
2. Beerling, D. J. and J. M. Perrins. 1993. Biological Flora of the British Isles. *Impatiens glandulifera* Royle (*Impatiens roylei* Walp). Journal of Ecology. Vol 81 (2). Pp. 367-382
3. Ennos, A. R. Crook, M. J. & Grimshaw, C. (1993) A comparative study of the anchorage systems of Himalayan balsam *Impatiens glandulifera* and mature sunflower *Helianthus annuus*. Journal of Experimental Botany, 44, 133-146.

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